

THE TECH

VOL. XXVIII. No. 7

BOSTON, MASS., WEDNESDAY, OCTOBER 14, 1908

PRICE THREE CENTS

FOOTBALL TEAMS DOING GOOD WORK

**Both Classes Taking Much
Needed Brace in
Tug-of-War**

FEW 1912 RELAY MEN

**Sophomores Making Their Best
Bid for Supremacy in
Track Contest**

Both football teams are out for practice every day, the sophomores at the oval adjoining the armory, the freshmen at the Field. Enough men have reported from both classes to permit the coaches to divide their men into two teams, playing one against the other. This method gives the players the best possible practice, giving them a chance to become proficient in scrimmage work as well as to become familiar with the regular routine of the game. The sophomores seem to have the system of open and fake plays down to a science, owing to the direction of their coach, Mr. Simons, a Princeton football star. The freshmen are working hard, the men show a good spirit and it is almost a certainty that they will score upon their opponents in the class contest on November 6. The team will probably be chosen the latter part of next week, and is expected to average about 160 pounds. The freshmen concede about ten pounds average to their rivals. What they lack in weight they should make up in agility, and an exceedingly interesting contest is to be anticipated.

Tug-of War

Enthusiasm on the tug-of-war teams seems to be taking a new start. Class interest, which was decidedly lacking the first of the term, has been revived and all the men out are going into the event with a good deal of energy. The number showing up daily on both the freshman and sophomore teams still continues to grow, and any man who has not yet presented himself should report to his manager at once. It is not too late, and by hard work the teams can be made. L. D. Nisbet, the sophomore coach wants fifty men to report daily.

Manager Woodward of the 1912 tug-of-war reports exceedingly good support. Between thirty and forty men are reporting daily and the coaches are developing good team work. Manager Lawrence of the 1911 tug-of-war is not having quite as good support from his class and the men are not reporting in large numbers. Twenty-five men are all that their team has been able to get out.

Chances of victory between the two teams, judging from the present condition and accomplished results, are slightly in favor of the freshman crowd. There seems to be a spirit of hustle and push among the 1912 men that is, as yet, lacking in their rivals.

Track

Yesterday afternoon the sophomore relay team confined their practice to passing the flag. Lack of proficiency in this part of the event lost the race for the 1911 squad a year ago, but this time, with the passing of the colors gotten down to a science and with two runners who won their T last year, 1911 should be able to come in at the finish in much better position. This afternoon the freshmen will be excluded from the track, and all sophomore candidates are urged to be present. Coach Kanaly will get a line on the team, which he hopes will break the field day record of three minutes flat made by 1906 and equalled last year.

The freshmen are still weak in numbers at the track and although a few come out regularly and work hard, the majority of the entering class don't seem to know where the Field is. Less than 14 men—the number required to make up a team with substitutes, show up for daily practice.

AUTUMN REVIEW OUT YESTERDAY

**Institute News of Summer
and Present Prospects
Discussed**

CHEMICAL THESIS WORK

**Function of Technology Club
Stated—Summer
Schools**

"The Technology Review" appeared yesterday. It contains a number of interesting articles on the New Union, investigations in the chemical department, steam turbine engineering, and other general news.

Besides giving an excellent description of the building, its location, and furnishings, the article on the Union tells how the building is run. The cuts shown are exceptionally good, especially the frontispiece of the lounging room.

During the last three months a number of important investigations in the chemical department have been made which deal with problems of today, notably that of Mr. R. C. Wint 1908, on the presence of manganese sulphide in steel rails, and that of Messrs H. E. Butsford and A. W. Clark on the "Influence of Temperature on Yield in the Destructive Distillation of Wood." Other articles treated are the results of the investigations of Professors S. P. Mulliken which will probably be published in 1909 as volume 3 of Dr. Mulliken's "Analytical Method," and those of Professor Woodman in the study of several important lines of food examination. Mrs. E. H. Richards has also taken up problems connected with the sanitary and commercial examination of water supplies.

The aim of the Technology Club is then dwelt upon with some length, and every man eligible is invited to join this institution.

The chapter on steam turbine engineering treats in a clear, concise manner the present status of the science at the Institute.

A report on the summer school of industrial chemistry shows that considerable ground was covered during the past year. Visits were made to manufacturing establishments in the neighborhood of New York and at various points in New Jersey and Pennsylvania, the trip extending as far as Pittsburg. In all, opportunity for inquiry and investigation was afforded in twenty-six different plants.

A brief description of the work of the members of the summer school in mining, affords a good insight into the work. The school was held last summer in Nova Scotia, the party visiting five different mines and plants. The party was smaller than usual but results were exceedingly satisfactory.

A new department of the Review has been introduced entitled "Tech Men in the Public Eye", which seems to be a good thing as it gives at a glance an insight as to what Tech graduates amount to when they are thrown on their own resources.

After a long and successful career as editor-in-chief of the Review, Mr. James P. Monroe 1882, has resigned and the magazine will now be managed by Isaac W. Litchfield 1885.

GOING TO WELLESLEY

Wellesley will see an influx of Tech cross-country men Saturday afternoon. The weekly hare and hounds run will be held there Oct. 17. The trail will be laid around beautiful Lake Waban and the race for home will be up Washington St. The course is about 5 miles.

Dr. Fitch of the Mt. Vernon Congregational Church, will be the speaker at the next meeting of the Tech Y. M. C. A. Sunday evening, Oct. 18, from 8.45 to 7.30, at the Union.

ADVISORY COUNCIL ANNOUNCES RULES

**Field Day Provisions for the
Conduct of Class
Athletic Tests**

GAMES BEGIN AT 2.15

**Football Game—Relay Race and
Tug-of-War is Order
of the Events**

Maj. Frank H. Briggs of the Advisory Council has completed the following regulations to govern Field Day.

Event I. A football game will start promptly at 2.15 P.M., between eleven men from each class. The game will be two 25-minute halves, with a rest of 10 minutes between the halves. Current rules governing Intercollegiate football games to apply. Football teams must be on the field at 2.10 P.M.

Event II. A relay race of a mile and a half to be run by twelve men from each class, each man to run one-eighth of a mile. The sequence of runners shall be assured by the passing of flags from man to man, the successive runner to be stationary, with one foot on the mark, when he receives the flag. The rules governing New England Intercollegiate relay races will apply. The relay race will be run immediately at the close of the first half of the football game and men must be on the field at once.

Event III. Tug-of-War: The number of men is limited to twenty-five from each class. No artificial means will be employed. Each contestant shall pull standing. The length of the pull shall not exceed five (5) minutes.

A tape shall be affixed at the centre of the rope and fifteen feet on each side of the centre tape there shall be two side tapes.

A centre line shall be marked on the ground, and fifteen feet on either side of the centre line, two side lines parallel thereto.

At the start the rope shall be taut, and the centre tape over the centre line, and the competitors shall be outside the side lines. The start and finish shall be the firing of a pistol.

The pull shall be won when one team shall have pulled the "side tape" on rope of the opposing side over the centre line, or at the end of five minutes, the team whose side tape is farthest from the centre ground line. The pull must be made within a "path" not exceeding fifteen feet in width.

No competitor shall wear boots or shoes with any projecting nails, springs

(Continued on page 3.)

TRACK FOR GYM WORK

**Faculty Publish Notice of New
Physical Exercise Scheme**

In regard to the new scheme for substituting track work at the Field for the regular instruction in gymnasium, in the Freshman year, the Faculty has given out the following notice:

Those intending to substitute work at the Field for gym must report to Coach Frank Kanaly at least three afternoons a week, one of these afternoons being Saturday, and the other two optional. Mr. Kanaly will keep an account of all those submitting such work, and if the men do not show up will be obliged to report them to the office. Then the regular gym work will be taken up by those who did not report as they agreed.

The new scheme will begin next Thursday, and will continue until Dec. 1. As a special inducement every Saturday a special competitive event will be held, the first being a 100-yard dash, the second a 220, and so on.

Those men who wish to make this substitution must report to Mr. Kanaly at the Field by tomorrow, for registration.

NEW VOLUME BY PROF. MULLIKEN

**Contains Valuable Data on
the Identification of
Dyestuffs**

THESIS BY 1908 MEN

**On Influence of Temperature on
Yield in Distillation
of Wood**

Among the most important of the recent investigations in the Research Laboratory is that of Prof. S. P. Mulliken on a systematic procedure for the identification of organic compounds.

On account of their complexity of reactions and their varied and complex characters the carbon compounds are not easily identified by the ordinary system of qualitative analysis. It is in the interests of the scientist and the practicing chemist that these compounds should be identified as easily as possible. For this reason, Dr. Mulliken has devoted several years' thought and effort to this work.

Dr. Mulliken has already published two of a series of volumes along this line, the first of which appeared in 1904, "A Method for the Identification of Pure Organic Compounds." Since 1906 he has been perfecting a system of analysis for the detection of modern commercial dyestuffs. Undergraduates and assistants have aided him in this work, although by far the greater part has been accomplished through his own efforts. Dr. Mulliken hopes to give out the results of these investigations next year in a volume entitled "A Method for the Identification of the Synthetic and Natural Dyestuffs." It is confidently expected that this book will justify the great labor of editing it, by becoming of permanent value to all concerned with the study and reproduction of dyestuffs, and their color effects on textile and other fabrics.

An important thesis completed last year by H. E. Batsford 1908 and A. W. Clark 1908 was that on the "Influence of Temperature on Yield in the Destructive Distillation of Wood." The enormous

(Continued on page 2.)

JOINT DINNER HELD

**Corporation and Faculty Discuss
Student Welfare Problems**

Corporation and faculty of Technology held a dinner last evening in the Union at which the problems of student welfare received primary recognition.

This is the first time that the two bodies of government have held a joint dinner and indicates the growing tendency at Technology for more consistent methods and closer touch with the students. Athletics, the new union, student government, and particularly the new point system for office-holding were earnestly discussed.

The members of the faculty present were: Prof. John Bigelow, Dean Alfred E. Burton, Prof. Charles Cross, Prof. Charles F. H. Currier, Prof. Davis R. Dewey, Prof. Dugald C. Jackson, Prof. Gaetano Lanza, Prof. Cecil H. Peabody, Prof. Robert H. Richards, Prof. Peter Schwamb, Prof. Henry P. Talbot, and Dr. Harry W. Tyler. The members of the corporation present were: Arthur T. Bradley, Howard A. Carson, Thomas C. duPont, Frederick R. Fish, John R. Freeman, Francis R. Hart, Charles W. Hubbard, Charles C. Jackson, George W. Kittredge, Elliot C. Lee, Thomas L. Livermore, Frank L. Locke, A. Lawrence Lowell, Charles T. Main, Everett Moss, Arthur A. Naves, Robert S. Peabody, Wm. S. Putnam, A. Lawrence Ratch, J. B. Sewall, Richard H. Soule, Frank G. Stantiel, Charles A. Stone, Elihu Thompson, James P. Tolman, and Lucius Tuttle.

THE TECH

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Wednesday, October 14, 1908.

COMMUNICATION

The Editor of the "Tech."

Sir: As the student activities are now centered at the Union, it would appear that a general notice board would be advisable there. As it is now, notices are tacked on the doors, walls or any available space. This is neither an improvement in the appearance of the building nor a sure method of notification of meetings, etc. therefore I suggest a permanent bulletin board be placed in the Union, and that such bulletin cases as the Musical clubs have in Rogers, be removed to the Union. This last is also the desire of many members of the said clubs.

Denison K. Bullens 1909.

FENCING CLUB ORGANIZE

Members of last year's fencing club met Friday and elected V. C. Grubnau 1909 captain to fill the place of E. M. Loring, who has resigned. Only two or three members of last year's team were on hand. A class of ten or twelve men is to be formed that will meet Monday, Wednesday and Friday, receiving instructions under Coach Fournon. Green men stand as good a chance as anybody else and if a good number show up the expenses will be considerably reduced.

A team is to be formed of three men and two substitutes. A date is to be soon closed with Springfield Training and later with University of Syracuse, Harvard, Amherst and Bowdoin. A full schedule will be arranged to give ample training for the intercollegiate meet. Good results are expected this year.

A meeting is called for Thursday Oct. 15 at one o'clock in 21 Rogers and all men interested are expected to attend.

MANDOLIN NOTES

Punctuality and attendance will be two very necessary qualifications for attendance in the mandolin club this year. Leader H. J. Stiebel has determined to have a small and interested number of players form the club, rather than a large number of men who, although capable musicians, show too little interest in the rehearsals. A cut will be made following the next rehearsal.

At present the candidates are studying the "Skeleton Dance," a descriptive number, "Birds and the Brook," a schottische, and "The Great Dividé," a march. W. D. Richardson 1910, C. Wengert 1910, and W. W. Warner 1911 of last year's club have returned to play again this year. Manager D. R. Stevens 1911, has found it necessary to resign his position as well as membership in the club, owing to the recent action of the Institute Committee.

At present there are no guitars on hand. These are an absolute necessity in a mandolin club, and it is earnestly urged that all men who have the slightest knowledge of the instrument offer their services.

ANNOUNCE RULES

(Continued from page 1.)

or points of any kind, or make any holes in the ground with his feet or in any way before the start; or wilfully touch the ground with any part of his person but with his feet. The "Anchor" only may pass the rope around his body and may wear a suitable belt.

Each team will be allowed one coach from the same class on the side line. He may count and use a megaphone. In the first trial, the class of 11 will take the Easterly end of the rope; in the second trial, the Westerly end. In case of a third trial, the choice will be tossed for, the manager of the class of 11 team to call.

Any protest in connection with the above rules, must be filed with the Chairman of the Advisory Council not later than Monday, Nov. 2nd.

It has been established in past years as a precedent in connection with Athletics, that special students shall be rated with the class with whom they take the greatest number of hours, according to the tabular view.

CHESS CLUB TO MEET

There is to be a meeting of the Chess Club Thursday, 1 P.M. in 11 Pierce. This is the first meeting of the year and plans are to be made for the winter. Two years ago some of the members played regularly in tournaments arranged by a local suburban club but last year no such opportunity presented itself. In fact the club was not organized until late in the first term and while a club tournament was arranged and a few games actually played during the second term the men did not cooperate very well and the scheme was not a success.

The facilities for playing chess at the old Union were very poor and the club plans this year if its financial condition will permit to buy some new, more useful but less ornamental than the old chessmen, which are to be kept at the cage. Students borrowing the sets will sign a receipt and be held responsible for them until returned. A club tournament will be discussed at the meeting and if feasible tournaments will be arranged with other colleges. Officers will be elected for the year.

All men in the Institute who have ever played chess are invited to come to the meeting Thursday—freshmen are particularly urged to attend.

FRESHMEN ADDRESSED

The second of the series of talks to the freshmen was given yesterday afternoon by Dr. F. W. White, medical advisor for the Institute. Particular stress was laid on the care of the eyes, value of fresh air and exercise and sleep. He discussed the questions of bathing, clothing, alcohol, tobacco, and artificial respiration.

OPPONENTS OF SYSTEM

Persons with grievances against the new point system are to have a hearing on the subject. The Institute Committee requests that anyone having suggestions to make regarding the point system will explain them fully in writing and leave them at the Cage for the Committee on Office Regulation or appear in person before the committee.

CALENDAR

Wednesday, October 14

4.15 P.M. Basses of the Glee Club, at Union.

4.22 P.M. Cross-country squad leaves Back Bay station for run over Harvard course Highland station to Tech Field.

Thursday, Oct. 15, 1908

1.00 P.M. Fencing Club meeting in 21 Rogers.

1.00 P.M. Chess Club meeting in 11 Pierce.

4.00-6.00 P.M. Freshmen report to Coach Kanaly for Physical training.

4.00 P.M. Nominations close at the Cage.

4.00 P.M. Rehearsal of Glee Club.

4.30 P.M. Cross-country men report at the Field for track work.

Friday, Oct. 16, 1908

4.00 P.M. Cross-country men walk from Rogers' steps.

4.00 P.M. Mandolin Club Rehearsal at the Union.

5.00 P.M. Cross-country men walk from Rogers' steps.

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PLANS

PROF. MULLIKEN'S BOOK

(Continued from page 1.)

mous waste of the forests in this coun-
try has caused the necessity of increas-
ing the wood products especially those
derived from destructive distillation.

Wood heated in the absence of air
gives off many compounds the most val-
uable of which are combustible gases,
wood-alcohol, acetic acid, wood-tan and
charcoal. The proportions of these pro-
ducts depend not only upon the kind of
wood, but more especially upon the tem-
perature to which the wood is heated
and the rapidity with which the heat is
applied.

The investigation was carried out in
the Wood Distilling Plant of the Avery
Chemical Co. at Lowell, where the best
of apparatus was at the students' dis-
posal. After many experimental runs had
been made, the results of the observa-
tions and the tabulated analysis clearly
showed that for a large yield of com-
mercial products a slow even applica-
tion of heat and a relatively low maxi-
mum temperature were needed.

Loss in Soda Cycle

The manufacture of paper from wood
was another thesis investigation of in-
dustrial chemistry, under the charge of
Dr. W. H. Walker, carried on by Ele-
azer Myers and Chesney H. Criswell
with special reference to the unaccount-
able loss in the soda cycle.

To determine the unknown outlet or
outlets of about one-fourth of the soda
in use, which theoretically should com-
plete its cycle with no loss, it was neces-
sary to find how much was in action
and consequently how much was lost in
each operation. Special apparatus and
methods were required. What went up
the flue proved a hard thing to answer
because of the excessive temperatures
involved. This was at last successfully
deduced as were the majority of the
other loopholes by a good deal of in-
genuity.

Although the total loss was not en-
tirely accounted for the results enabled
the investigators to suggest changes
which the general manager of the paper
mill says have already repayed them for
any slight inconvenience the test may
have made.

Water Analysis

Mrs. E. H. Richards has been study-
ing a means of presenting the subject of
water analysis to Technology students in
the limited time allowed for the sub-
ject on the attendance cards. The diffi-
culties of the course have been greatly
increased by the growing use of deep,
driven wells as sources of commer-
cial supply, and the unknown influ-
ence of these waters upon the life of
conveying pipes, and the maintenance of
boilers. Mrs. Richards has materially
increased the possibilities of the course
through her determination of the best
use of available data, and the most
suitable means of illustrating the many
varieties of water from different locali-

ties as well as the amount of laboratory
work required for such a course.

Pure Food Analysis

Prof. Henry P. Talbot in the recent
Technology Review writes the follow-
ing with regard to the work done in the
laboratory of food analysis under the
direction of Prof. Woodman. "The pas-
sage of National Pure Food Act and the
consequent greatly increased interest in
all that pertains to food has directed
much attention toward the improvement
of present methods of food analysis, both
general and official. The fact that the
results of chemical analysis will in many
cases be brought into the courts neces-
sitates a critical study of existing meth-
ods, and in not a few instances the
development of new ones. Prof. Wood-
man's position as associate referee on
revision of the official methods, and di-
rect connection with the practical en-
forcement of the pure food laws, has
made it possible for the fourth-year stu-
dents in the laboratory to undertake
work which will be of immediate and
practical importance in this line.

Among the problems which have been
worked out may be mentioned a new
method for the assay of commercial
almond extract. The amount of almond
oil in a pure extract is fixed by definite
standard, but the methods for determin-
ing the amount present have been, for
the most part, very unsatisfactory. The
new method which has been developed
for the examination of these extracts is
accurate, rapid, and easy of execution.
It can be applied also to the assay of
almond oils and to pharmaceutical pre-
parations of benzaldehyde. In connection
with this work it was found possible to
shorten and improve in many details the
process for the preparation of specially
pure alcohol, which will prove of con-
siderable value in the examination of
whiskies and lemon extracts.

Much work has also been done on
coffee with special reference to the es-
timation of its tannin and alkaloid con-
tents. There have appeared on the mar-
ket in recent years several brands of
"purified" or "refined" coffee, for which
physiological virtue is claimed on the
ground that they have been freed from
the excess of tannin and caffeine. Accu-
rate and rapid methods for the determi-
nation of these constituents are greatly
in demand. The present methods are te-
dious to a degree requiring several days
in order to obtain even approximate
values. It has been found possible
through the work in the food laboratory
to shorten some of these processes. The
modified method, for instance, giving re-
sults in three-quarters of an hour that
formerly required seventy-two hours,
and results of greater accuracy, as well.
New applications of volumetric methods
for alkaloid assay to the case of caffeine
have brought about distinct improve-
ment. In connection with the examina-
tion of coffee a thorough revision of the
present methods for the analysis of tea,
cocoa, and chocolate, has been under-
taken with the aid of the students in
(Continued on page 4.)

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DEVOTED TO THE INTERESTS OF
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OF TECHNOLOGY

AND

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OF CLASS SECRETARIES

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The Review aims to develop closer relations
among Institute men and to stimulate their in-
terest in the work of the College. It is in no
sense an engineering magazine, but deals
broadly with the problems of Technological
Education and the responsibilities of the pro-
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This Cop arrested an automobilist but he wore
 KNICKERBOCKER SHOES
 and he let him go.

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NOTICES

GLEE CLUB—All Bases today at 4.15 sharp. Whole club Thursday at 4.15.

1909 NOMINATIONS—Nominations of candidates for 1909 class officers must be signed by 10 men and left at the Cage before 4.00 P.M. tomorrow.

IOWA—All Iowa men are requested to leave a note at the Cage before Thursday night saying whether they will come to the Iowa Club dinner Saturday night at 7 o'clock at the Union.

FIELD DAY, 1908—Proposals in writing, for the right to publish the official program, will be received up to 10 A.M., Thursday, October 15th. Address to:—
 Mr. Frank H. Briggs,
 22 High Street,
 Boston, Mass.

PHYSICAL TRAINING—All freshmen who wish to substitute athletics for the compulsory gymnasium work must report to Mr. Kanaly, director of athletics, at the Field Thursday between 4 and 6 P.M. Further notice will appear in the Tech on Wednesday.

CROSS COUNTRY—The training schedule for the rest of the week is as follows:—Today, run over the Harvard course, leaving Back Bay station at 4.22, fare is ten cents; Thursday, report for track work at the Field at 4.30; Friday, walking parties leave Rogers steps at 4 and 5 o'clock; Saturday, hare and hounds run.

At the meeting of the Catholic Club in the Union last evening the following were elected a committee to arrange for a dance to be held later in the year: P. D. White 1911, R. Walsh 1912, W. J. Keefe 1910, J. C. McGuire 1912, J. J. Devlin 1910.

President Heidelberg 1909 gave a talk introducing to the new men the ways of the club. Father McCarthy gave a short address.

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Jewellers and Importers of Novelties

THESES BY 1908 MEN

(Continued from page 3.)

food analysis and other collaborators. A special study has already been made, as a part of this, of the methods for the simultaneous estimation of the sugars in milk chocolate.

Artificial Colors

Another question of importance in food work and of much chemical interest, since it is by chemical tests that the problem is to be solved, is that of the detection of artificial colors. Apart from the question whether or not these colors are injurious when used in foods, a danger which in the case of many of the coal-tar colors there is reason to believe is a positive one, their use is restricted under the provisions of the pure food laws for other reasons. These colors are often added for the purpose of simulating a higher grade article or for concealment of inferior or damaged conditions of the goods.

CLASSIFIED ADS

Advertisements under this head are inserted at the rate of five cents a line of six words, payable in advance, and copy should be handed to the business manager the morning before publication day.

TUXEDO FOR SALE—New, worn three times, size 36. Address L. F., care of Cage.

DRILL SUIT—New last year, including cuffs and gloves, for sale CHEAP. Leave note at Cage for G. C. K.

SLIDE RULES—New slide rule with inverted scale for sale by R. S. Bicknell, care of Cage.

FOUND—Bunch of keys with tag of Bay State Trust Co. deposit vaults. Owner may find at Information desk.

1912 LETTER PLATES FOR SALE—A set of plates used slightly for one year. Will sell cheap. Apply to B. F., care of The Tech, No. 30 C.

DRILL Suit for sale CHEAP. Corporal stripes and cap. Last chance to get your suit before the next drill. Apply to M. W. H., care of The Tech. 30 C.

FOUND—A sum of money, which will be returned to the owner on statement of the amount and circumstances of loss.
 F. J. Moore
 43 Walker Bldg., M. I. T.

FOUND—A real fountain pen. The Parker Lucky Curve Pen will last you a lifetime and will do all the work you require of it if you will fill it with good ink when empty. See G. B. Forristall about these pens. \$1.50 and more.

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 formerly of Hotel Lenox has leased The Tech Barber Shop, Hotel Westminster. Special attention paid to students.

IF

you have a drill suit to sell, or a few second-hand books, or anything that you need to sell put a want advertisement in

THE TECH

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